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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HANAFY MELEIS

Appeal 2008-003258
Application 09/910,555[1]
Technology Center 2400

Decided: January 27, 2010

Before LEE E. BARRETT, LANCE LEONARD BARRY, and
JAY P. LUCAS, *Administrative Patent Judges.*

BARRETT, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1, 3-6, 8-13, 15-20, 22-26. Claims 2, 7, 14, and 21 have been canceled. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We reverse.

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[1] Filed July 20, 2001, titled "Network Models, Methods, and Computer Program Products for Managing a Service Independent of the Underlying Network Technology." The real party in interest is Trendium, Inc.

STATEMENT OF THE CASE

The invention

The present invention relates to managing a service in an end service domain (ESD) that associates the service with an end service provider (ESP), such as an Internet Service Provider (ISP). The ESD includes a plurality of wholesale service domains (WSDs) that each includes one or more networks that provide traffic transport for the ESD. One or more gateways are used to couple one of the WSDs to another one of the WSDs, and to perform protocol translation on traffic passing between the coupled WSDs. A service management system is coupled to the ESD and stores a plurality of objects that represent resources in the ESD and a policy database that comprises rules for associating requirements of the service with resources in the ESD. Spec. 2, l. 23 to Spec. 3, l. 13.

Illustrative claim

Claim 1 is reproduced below for illustration:

> 1. A network model for managing a service, comprising: an end service domain that associates the service with an end service provider, the end service domain comprising:
>
> a plurality of wholesale service domains, respective ones of the plurality of wholesale service domains comprising at least one network that provides traffic transport for the end service domain;
>
> a plurality of gateways, wherein at least a first one of the plurality of gateways couples one of the plurality of wholesale service domains to another one of the wholesale service domains and is configured to perform protocol translation on traffic passing between

> the coupled wholesale service domains, and wherein at least a second one of the plurality of gateways is configured to couple a user to the end service domain and is further configured to communicate with the user by a protocol associated with the service;
>
> a process domain that provides an abstract representation of applications provided by the end service domain;
>
> a service management system that is communicatively coupled to the end service domain, the service management system comprising:
>
> a plurality of software objects that represent resources in the end service domain for providing the service; and
>
> a policy database that comprises rules for associating requirements of the service with resources in the end service domain.

The references

Li	US 6,012,088	Jan. 4, 2000
Bahlmann	US 6,487,594 B1	Nov. 26, 2002 (filed Nov. 30, 1999)

The rejection

Claims 1, 3-6, 8-13, 15-20, 22-26 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Li and Bahlmann.[2] The Examiner finds that Li teaches all of the limitations of claim 1 except for the last limitation of a "policy database." Final Office Action (FOA) 2-4. The Examiner finds that

[2] The Final Office Action entered April 3, 2006, erroneously refers to Patent 6,012,088 as "Cobb." The heading in the Brief, page 6, also erroneously refers to "Jorgenson."

Bahlmann teaches a policy database, as claimed, and concludes that it would have been obvious to implement the policy database of Bahlmann in Li to allow the Internet service provider to standardize the infrastructure and quickly react to subscriber demands for services. FOA 4-5.

ISSUES

Appellant argued that the Examiner erred in finding, with respect to claim 1, that: (1) Li teaches "a plurality of gateways . . . configured to perform protocol translation on traffic passing between the coupled wholesale service domains"; (2) Li teaches "a process domain that provides an abstract representation of applications provided by the end service domain"; (3) Li teaches "a plurality of software objects that represent resources in the end service domain for providing the service"; and (4) Bahlmann teaches "a policy database that comprises rules for associating requirements of the service with resources in the end service domain." Appellant argues that independent "Claims 6, 13, and 20 include similar recitations." Br. 6. However, it is clear that claims 6, 13, and 20 do not include limitations (1), (2), or (3), and the only limitation common to all independent claims is (4). Accordingly, the threshold issue is:

Has Appellant shown that the Examiner erred in finding that Bahlmann teaches "a policy database that comprises rules for associating requirements of the service with resources in the end service domain"?

If the answer to this question is yes, then the rejection of all claims must be reversed. If the answer to this question is no, then the rejection of

claims 6, 8-13, 15-20, and 22-26 has to be affirmed since Appellant has not argued the other limitations of these claims, and we will consider the other limitations as to the rejection of claim 1.

PRINCIPLES OF LAW

"[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). A rejection under 35 U.S.C. § 103(a) is based on the following factual determinations: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) any objective indicia of non-obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 399 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966)).

Every limitation must considered in addressing obviousness. *In re Wilder*, 429 F.2d 447, 450 (CCPA 1970) ("every limitation positively recited in a claim must be given effect in order to determine what subject matter that claim defines"). All claim limitations must be taught or suggested.

FINDINGS OF FACT

Specification

The Specification describes the limitation at issue as follows:

> The data module 92 may comprise a policy rules database 94 and a resource capabilities database 96. The policy rules database 94 comprises a set of rules for associating service requirements with resources in the ESD 22. The service requirements may comprise requirements associated with a customer/user and/or business requirements associated with a service provider. The resource capabilities database 96 comprises information regarding the capabilities of resources in the ESD 22.

Spec. 10, ll. 23-29; *see* Fig. 3.

"Services" are network services, such as voice services and more advanced data services (Spec. 2, ll. 7-10). An end service domain (ESD) provides a service delivery environment that is associated with an end service provider (ESP). An ESP is a provider of a service to consumers, which may be, for example, end users and/or other service providers. Conventional services, such as Internet service, may be modeled as an ESD and retail carriers, such as local exchange carriers (LECs), inter-exchange carriers (IXCs), and Internet service providers (ISPs) may be represented as ESPs. Spec. 5, ll. 14-22. A Domain Name System (DNS) is another service. Spec. 6, ll. 24-26.

"Resources" are interpreted to be the hardware and software in the ESD that perform the services.

A "service management system" manages services in the ESD. Software objects in the service management system represent each resource

in the ESD by identifying the source's name, capabilities, limitations, and any relevant characteristics of the resource. Spec. 9, ll. 28-31.

Bahlmann

The relevant portion of Bahlmann describes the central policy database (CPD) 12 as follows:

> Using this model, various database objects reside in CPD 12 and RPDs 14 while the actual data is located in each region. Included with each database object are the necessary business rules, applications, and work flow needed to enable the new technology. This information is used by provisioning support systems (i.e., hsdtools, service order processors, etc.) so when they encounter a device they will be able to intelligently process (examine, provision, modify, deprovision, etc.) the device.
>
> The information regarding the infrastructure elements that CPD 12 needs to store includes all router interfaces and associated router configurations; networks, policies, and service group configurations (provisioning server components); Ethernet switches/configurations; all reserved static Internet Protocol (IP) addresses and their associated information including host names, supported customer premise equipment (CPE)/cable modem termination system (CMTS) equipment and their associated configurations; and service group definitions and their associated mappings to actual products. Once assembled this information must be made available for regional analysis. This implies that the data must be distributed by region and accessible from any location.

Col. 3, ll. 17-40.

ANALYSIS

The Examiner finds that Bahlmann teaches the limitation in the description of the central policy database 12 at column 3 lines 19-40. FOA 4. Appellant acknowledges that the central policy database 12 described in Bahlmann include business rules, applications, and data used to provision network equipment, but argues that "Bahlmann does not appear to include any disclosure or suggestion of including rules that associate requirements of a service with the network resources." Br. 9.[3] "Instead, the central policy database 12 appears to include only technical configurations and policies for provisioning network elements, such that the network elements work properly with other provisioned equipment." Br. 9.

The Examiner states:

> Examiner respectfully disagrees with the applicant because Bahlmannn [sic] teaches in column 3 lines 19-40 and Fig. 1 element 12,14, having a central policy database (policy database), which stores all router, interfaces, network policies, service group configurations, supported customer premise equipment, cable modem termination system equipment and their associated configurations (policies associating requirement of the service with the resources).

Ans. 16.

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[3] "Br." refers to Appellant's Second Supplemental Brief on Appeal Under 37 C.F.R. § 41.37 filed March 29, 2007. "Ans." refers to the Examiner's Answer entered July 11, 2007. "Reply Br." refers to Appellant's Second Reply Brief on Appeal Under 37 C.F.R. § 41.41 filed September 11, 2007.

The Examiner further states:

> Examiner would like to point that nowhere in the claim language does the applicant specify as what are the rules that associate requirements of a service, which are associated with the network element. The claim language states a policy database tat [sic] comprises rules for associating requirements of service with resources in the end service domain. Bahlmannn [sic] teaches a policy database, which stores network policies, service group configuration, which are rules/policies, which are associated with the routers and the network elements (with resources) in the end service domain. The broadest interpretation of requirement of service with the resources are deemed as policy database which stores all router, network policies and service group configuration and cable modem termination system equipment and their associated configuration (associated with the network element). Therefore Bahlmannn [sic] teaches the claimed limitations.

Ans. 16-17.

Appellant replies that Appellant used the term "element" instead of "resource" because the Final Action referred to "infrastructure elements." It is argued that even if the infrastructure elements in Bahlmann are assumed to correspond to resources in the end service domain, the policy database 12 in Bahlmann fail to indicate rules that associate requirements of a service with infrastructure elements. Reply Br. 5. "Instead, the central policy database 12 appears to only include technical configurations and policies that are used for provisioning." Reply Br. 5.

The limitation "a policy database that comprises rules for associating requirements of the service with resources in the end service domain"

requires "requirements of the service" and "resources in the end service domain" for performing the service and an "association" between them.

There is no dispute that Bahlmann teaches a policy database, business rules, and information about resources (routers, networks, switches, configurations, etc.). The specific issue argued is that Bahlmann does not teach "rules for associating requirements of the service" with the resources. The Examiner states that Bahlmann teaches that "central policy database (policy database), which stores all router, interfaces, network policies, service group configurations, supported customer premise equipment, cable modem termination system equipment and their associated configurations (policies associating requirement of the service with the resources)." Ans. 16. However, the Examiner does not explain what constitutes the "requirements of the service" or the "rules for associating" those requirements with resources. Bahlmann's mention of information about "all router interfaces and associated router configurations" (col. 3, ll. 28-29) does not describe "rules for associating requirements of the service" with the router resource. Our reading of Bahlmann is that it describes information about resources that may be used by provisioning[4] systems to process the device, but not rules associating a service requirement with the resources, such as associating a quality of service (QoS) requirement with the resources.

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[4] "In telecommunication, provisioning is the process of preparing and equipping a network so that it can provide (new) services to its users." http://en.wikipedia.org/wiki/Provisioning (Jan. 6, 2010).

We agree with the Examiner's statement (Ans. 16-17) that the "rules for associating requirements of the service with resources in the end service domain" are not specifically defined. (It does not appear that the Examiner objects to the term "element" as opposed to "resource," as understood by Appellant.) Nevertheless, although broadly recited, there must still be "service requirements" and some "rules" for "associating" these requirements with the resources. We disagree with the Examiner's conclusion that "[t]he broadest interpretation of requirement of service with the resources are deemed as policy database which stores all router, network policies and service group configuration and cable modem termination system equipment and their associated configuration (associated with the network element)" (Ans. 17), because the "associated configuration" does not "associate" any service requirements with the network resource. The Examiner fails to identify the "requirements of the service" in Bahlmann.

Appellant has shown error in the Examiner's finding.

CONCLUSION

Appellant has shown that the Examiner erred in finding that Bahlmann teaches "a policy database that comprises rules for associating requirements of the service with resources in the end service domain," as recited in claim 1. This limitation is found in some form in independent claims 6, 13, and 20. Accordingly, the rejection of claims 1, 3-6, 8-13, 15-20, 22-26 is reversed.

REVERSED

rwk

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